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# A NEW SPECIES OF THE GENUS *PROSEVANIA* KIEFFER, 1912 (HYMENOPTERA: EVANIOIDEA: EVANIDAE) FROM INDIA

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**Summary**. A new species *Prosevania austrina* Rameshkumar et Kazmi, **sp. n.** is described from Tamil Nadu state in southern India. The new species is similar to *P. euerythrothorax* (Mani, 1943) and *P. parerythrothorax* (Muzaffer, 1943) but differs from both in the shape of head and the wing venation.

Key words: ensign wasp, taxonomy, new species, Indian subcontinent, Tamil Nadu.

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**Резюме**. Из штата Тамил Наду в Южной Индии описан новый для науки вид *Prosevania austrina* Rameshkumar et Kazmi, **sp. n.** Этот вид близок к *P. euerythrothorax* (Mani, 1943) и *P. parerythrothorax* (Muzaffer, 1943), но отличается от обоих видов формой головы и жилкованием крыльев.

## INTRODUCTION

The genus *Prosevania* was erected by Kieffer (1912) with *Evania afra* Kieffer as its type species. Species of this genus have been reported as parasitoids of cockroach oothecae of the families Blattidae and Blattellidae (Thoms & Robinson, 1986, 1987; Lit, 1988). The genus is represented by 102 species from all over the world (Deans, 2005; Deans *et al.*, 2019). It has been revised by Deans (2005). The genus *Prosevania* is closely related to the genus *Vernevania* Huben et Deans, 2003 and can be separated from latter by the 2M, 3M, 3CU usually present as nebulous vein, 1M close and convergent with Sc+R (in *Vernevania*, 2M, 3M, 3CU missing or spectral, 1M clearly separated from Sc+R) (Deans & Huben, 2003; Kazmi *et al.*, 2020). A key to Indian species of *Prosevania* was given by Mani & Muzaffer (1943). The genus *Prosevania* now consists of 103 species of which 17 species including the species described in this paper are known from India.

## MATERIAL AND METHODS

The specimen was collected using a sweep net from paddy field, Tamil Nadu, India and killed in ethyl acetate and stored in 70% ethyl alcohol. Later, specimen was dried and mounted

on rectangular card using water soluble glue, identified and photographs were taken with Nikon SMZ25 stereozoom microscope. Micro photographs were obtained using a Nikon DS-Ri2 camera attached to the microscope and processed by the NIS-Elements BR Analysis v5.20.00. The following abbreviations used in the text: F – female; M – male; OOL – minimum distance between the posterior ocellus and eye margin; POL – minimum distance between the two posterior ocelli; OAL – minimum distance between the posterior ocellus and anterior ocellus. Holotype of new species is deposited in National Zoological Collection, Zoological Survey of India, Kolkata, India (NZCI).

#### **TAXONOMY**

# Family Evaniidae

#### Prosevania austrina Rameshkumar et Kazmi, sp. n.

 $http://zoobank.org/NomenclaturalActs/FE539933-55D6-49FE-8674-CE9CF37B75FB \ Figs\ 1-6$ 

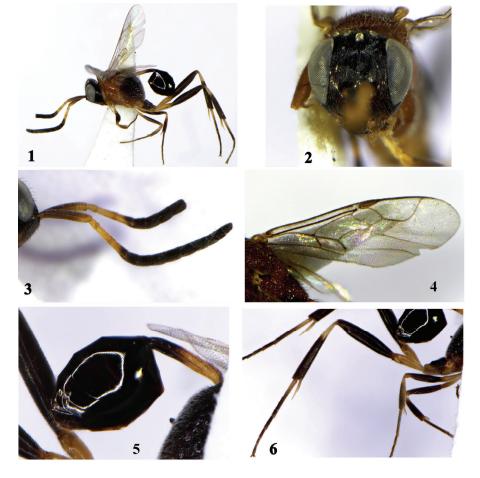
TYPE MATERIAL. Holotype – female, **India**: Tamil Nadu, Coimbatore, Paddy Breeding Station, 10<sup>0</sup>59'43.24" N, 76<sup>0</sup>54'59.22" E, 427 MSL, 12.VIII 2015, coll. J. Alfred Daniel (NZCI, Reg. No. NZSI 23494/H3).

DESCRIPTION. Female. Body length 4.2 mm.

*Head.* Black except clypeus, supra clypeus, basal of malar space, mandible, antennal sockets orange brown; ocelli silvery; antennal scape brownish except apex, pedicel, F1, basal 2/3 of F2 pale, rest antennal segments black; uniformly distributed silvery hairs on head; head almost as long as wide; frontovertex about  $2.0\times$  of head width, equal to scape length; mandible 4– dentate; a median line carina on face, both side strigate; POL  $2.0\times$  of OOL,  $2.8\times$  of OAL; malar length  $1.5\times$  of POL; genae strigate; antenna 12 segmented; scape  $5.8\times$  longer than broad; pedicel almost quadrate; F1  $0.4\times$  of scape length; F1 , F2 distinctly longer; apex of clava slightly truncate on ventral side. Relative measurements (in mm): head width (height) – 1.17(1.0); frontovertex width – 0.6; POL – 0.20; OAL – 0.07; OOL – 0.11; eye length (width) – 0.76 (0.48); malar space length – 0.32; scape length (width) – 0.76 (0.13); pedicel length (width) – 0.14 (0.11); F1 – 0.32; F2 – 0.27; clava length – 0.28.

*Mesosoma*. Pronotum, mesoscutum, scutellum orange; tegula pale yellow and transparent propodeum black except base of propodeum orange; mesoscutum  $0.7\times$  longer than wide; scutellum  $0.6\times$  longer than wide,  $1.6\times$  shorter than mesoscutum; sparsely distributed black long erect setae on thorax except base of propodeum densely distributed; thorax shallow foveate; mesopleuron less foveate; paraspidial furrow prominent reaching up to posterior margin. Legs: Fore coxa, trochenter, tibia pale brown; femur, tarsi brown except apex of femur; mid coxa, trochenter pale; femur tibia, tarsi brown except apex of femur, basal of tibia pale brown; hind coxa, femur, tibia dark brown except ventral apex of coxa pale brown; trochenter, basal 1/2 of tibia pale; tarsi dark brown except basal 1/2 of metatarsus, tibial spur pale; hind tibia  $1.1\times$  longer than mesosoma hight, as long as hind femur,  $1.7\times$  longer than 1st metatarsus; 1st metatarsus  $0.48\times$ of tarsal length. Relative measurements (in mm): mesosoma height -1.40; mesoscutum length (width) -0.56 (0.71); scutellum length (width) -0.33 (0.51); dorsellum length -0.42; hind femur length (width) -1.67 (0.31); hind tibia length (width) -1.63 (0.23); hind metatarsus length -0.96; tarsal length (1-5) -2.0; interior tibial spur length -0.34; exterior tibial spur length -0.55.

Wings. Hyaline; 7 cells; r-m vein spectral; 2M, 3M, 3CU present as nebulous vein; 1M close and convergent with Sc+R; 1st marginal cell  $2.1\times$  longer than wide; fore wing  $2.6\times$  longer than wide hind wing with 5 feneral hooks, M+ CU shorter than jugal lobe. Relative measurements (in mm): fore wing length (width) -3.12 (1.20); hind wing length (width) -1. 72 (0.56).



Figs 1–6. *Prosevania austrina* Rameshkumar et Kazmi, sp. n., holotype, female: 1 – habitus, lateral view; 2 – head, frontal view; 3 – antenna; 4 – fore wing; 5 – metasoma with petiole, lateral view; 6 – hind leg.

*Metasoma*. Black; ovipositor concealed; petiole black except basal half pale brown and longitudinally striate; petiole  $0.7\times$  longer than metasoma,  $5.2\times$  longer than wide,  $2.0\times$  length of dorsellum. Relative measurements (in mm): petiole length (width) -0.84 (0.16); metasoma length (width) -1.20 (1.0).

MALE. Unknown.

DIFFERENTIAL DIAGNOSIS. After examining the holotypes and original descriptions of *Prosevania euerythrothorax* (Mani, 1943) and *P. parerythrothorax* (Muzaffer, 1943) we found that the new species differs from above mention species in the following characters: head as wide as long; OAL 1.5× of OOL; mandible 4-dentate; antennal socket arises about 1/3 of eyes length; scape 5.8× as long as wide; a prominent median carina present on face; longitudinal striate on both side except median part; hind wing with 5 feneral hooks, M+CU

vein present and shorter than jugal lobe; petiole 2.0× length of dorsellum, 0.7× longer than metasoma, ovipositor concealed within metasoma. *P. euerythrothorax* is characterized by following characters: head 2.5× as wide as long; OAL as long as OOL; antennal socket arises about 1/2 of eyes length; median carina present on face but not prominent; longitudinal striate evenly on face; hind wing with 11 feneral hooks, M+CU vein absent; petiole 1.5× length of dorsellum; ovipositor exserted. *P. parerythrothorax* is characterized by following characters: head 2.8× as wide as long; OAL 0.5× of OOL; mandible 3-dentate; antennal socket arises about 1/4 of eyes length; scape 4.0× as long as wide; no median carina and lateral longitudinal striate on face; hind wing with 6 feneral hooks with M+CU vein; petiole half the length of metasoma).

HOSTS. Unknown.

DISTRIBUTION. India: Tamil Nadu.

ETYMOLOGY. The name of new species is originated from Latin adjective "austrinus" (southern) refers to type locality situated in southernmost part of India.

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#### REFERENCES

- Deans, A.R. 2005. Annotated catalog of the world's ensign wasp species (Hymenoptera: Evaniidae). *Contributions of the American Entomological Institute*, 34(1): 1–164.
- Deans, A.R., Yoder, M.J. & Dole, K. 2019. Evanioidea Online catalog of information about evanioid wasps (Hymenoptera). Available from: http://evanioidea.info (accessed 15 July 2020).
- Deans, A.R. & Huben, M. 2003. Annotated key to the ensign wasp (Hymenoptera: Evaniidae) genera of the world, with descriptions of three new genera. *Proceedings of the Entomological Society of Washington*, 105: 859–875.
- Kieffer, J.J. 1912. Hymenoptera, Ichneumonidae, Evaniidae. *Das Tierreich*, 30: I–XIX + 1–431
- Lit, I.L. 1988. A survey of hymenopterous parasitoids of cockroach oothecae with biological notes on two promising species. *Philippine Agriculturalist*, 71: 363–370.
- Kazmi S.I., Rameshkumar A. & Sheela S. 2020. A new record of the genus *Vernevania* (Hymenoptera: Evanioidea: Evaniidae) from India with description of a new species. *Far Eastern Entomologist*, 411: 21–24. DOI: https://doi.org/10.25221/fee.411.4
- Mani, M. S. & A. Muzaffer. 1943. Studies on Indian parasitic Hymenoptera III. Description of some new and records of some known Evaniidae. *Indian Journal of Entomology*, 5: 1–28
- Thoms, E.M. & Robinson, W.H. 1986. Distribution, seasonal abundance, and pest status of the oriental cockroach (Orthoptera: Blattidae) and an evaniid wasp (Hymenoptera: Evaniidae) in urban apartments. *Journal of Economic Entomology*, 79: 431–436.
- Thoms, E.M. & Robinson, W.H. 1987. Potential of the cockroach oothecal parasite *Prosevania punctata* (Hymenoptera: Evaniidae) as a biological control agent for the oriental cockroach (Orthoptera: Blattidae). *Environmental Entomology*, 16: 938–944.